

What is Claimed is:

- Sub B17
1. Lift device for lifting and lowering of a support device (2, 3B, 5) of a transport track segment of a transport device for work pieces or the like, which work pieces are deposited upon plate-, pallet- or framework-like work piece carriers (58), and upon which the work piece carriers (58) are seated translationally displaceable
- with a force producing device (35, 72, 73) for producing a force for lifting or lowering the support device (2, 3B, 5) and
 - with a force transmission device for transmitting the force from the force producing device to the support device
- thereby characterized, that
- the force transmission device includes at least one lever (25a, 25b), which on one side (29a, 29b) is coupled to be essentially horizontally displaceably guided with the force producing device (35, 72, 73) and on the other side (30a, 30b) is coupled with the support device (2, 3B, 5) and is guided for essentially vertical displacement.
2. Lift device according to Claim 1, thereby characterized, that the force transmission device includes two levers (25a, 25b), which are rotatably mounted (29a, 29b) in parallel arrangement respectively on one end to at least one slide bar (16a, 16b) guided for horizontal displacement and on the other end are rotatably mounted (29a, 29b) to at least one lift bar (17a, 17b) guided for vertical displacement parallel to the slide bar (16a, 16b).

3. ~~Lift device according to Claim 2, thereby characterized, that two slide bars (16a, 16b) are provided oriented parallel and bracketing the two levers (25a, 25b).~~
4. ~~Lift device according to Claim 2 or 3, thereby characterized, that two lift bars (17a, 17b) are provided in parallel orientation and bracketing the two levers (25a, 25b).~~
5. Lift device according to one of the Claims 2-4, thereby characterized, that the slide bars (16a, 16b) are associated with rollers (22a, 22b) for horizontal guidance on suitable guide bars (27, 27a, 27b).
6. Lift device according to Claim 5, thereby characterized, that the rollers (22a, 22b) are mounted rotatably in the slide bars (16a, 16b).
7. ~~Lift device according to Claim 5 or 6, thereby characterized, that the rollers are mounted rotatably in the guide bars.~~
8. Lift device according to one of Claims 2 through 7, thereby characterized, that the lift bars (17a, 17b) are provided with guide rollers (22a, 22b) for vertical guidance on suitable guide elements (13a, 13b).
9. Lift device according to Claim 8, thereby characterized, that the guide elements (13a, 13b) are connected essentially rigidly with the lift bars (17a, 17b).
10. Lift device according to one of the preceding claims, thereby characterized, that slide blocks (15a, 15b) are

provided for guiding the force transmission device (16a, 16b, 17a, 17b, 25a, 25b) in the sideways direction.

11. Lift device according to one of the preceding claims, thereby characterized, that the force transmission device includes at least one pneumatic device (72, 73).
12. Lift device according to one of the preceding claims, thereby characterized, that the force transmission device includes at least one hydraulic device.
13. Lift device according to one of the preceding claims, thereby characterized, that the force transmission device includes a linear motor.
14. Lift device according to one of the preceding claims, thereby characterized, that the force transmission device includes at least one (rotation-) motor drive (35) and a conversion device for converting the rotational movement of the motor drive (35) into a horizontal linear movement.
15. Lift device according to Claim 14, thereby characterized, that an eccentric disk, a crank disk (38) or the like is provided, which is driveable by a motor drive (35) and which is in operable association with one end (29a, 29b) of the lever (25a, 25b).
16. Lift device according to Claim 15, thereby characterized, that the eccentric disk, the crank disk (38) or the like carries an eccentric pin, crank pin (38a) or the like eccentric to the drive axis of the motor drive (35), which engages in a linkage mount (37a) provided on the one side of a crank (20), wherein a pin (36) provided on the one side of

the slide bar(s) (16a, 16b) engages in a linkage mount (37b) provided on the other side of the crank (20).

17. ~~Lift device according to one of the preceding Claims 14 through 16, thereby characterized, that the motor drive (35) is provided with a pressure or pull spring (18), of which the spring effect supports the start-up of the motor drive (35) at least during lifting of the support device (2, 3B, 5).~~

18. Lift device according to Claim 17, thereby characterized, that a connecting device (42) is provided on the other side of the slide bar(s) (16a, 16b), which is rigidly connected with a spring tensioning device (41), upon which a pressure spring (18) is seated on one end and which on the other side is seated upon a spring abutment (40) rigidly connected with the guide bar (27b).

19. ~~Lift device according to one of the preceding claims, thereby characterized, that two force transmission devices (16a, 16b, 17a, 17b, 25a, 25b, 18, 20) are provided in essentially identical form in parallel arrangement to each other, which respectively carry segments of an outer roller track (2) or an inner roller track (3B) of the support device.~~

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